Input Output testing of Arduino Nano

TXD	Not communicating to GSM
RXD	Not communicating to GSM
DMUX0	Output voltage Correct. 74HC154 not properly receiving voltage
DMUX1	Output voltage Correct. 74HC154 not properly receiving voltage
DMUX2	Output voltage Correct. 74HC154 not properly receiving voltage
DMUX3	Output voltage Correct. 74HC154 not properly receiving voltage
BG0	Read Correctly. Appropriate software response
BG1	Read Correctly. Appropriate software response
0X0	Read Correctly. Appropriate software response
0X1	Read Correctly. Appropriate software response
0T0	Read Correctly. Appropriate software response
0T1	Read Correctly. Appropriate software response
SCL	All addresses appropriately reading and writing.
SDA	All addresses appropriately reading and writing.
CV4	Read Correctly. Appropriate software response
TEMP1	Read Correctly. Appropriate software response
CIV	Read Correctly. Inappropriate software response. Baseline for voltage needs calibrating for proper amperage reading

SW4X	Read Correctly. Appropriate software response

Discussion:
Certain probes were unable to be tested due to the board requiring further fabrication.

Tested GUI screen

Analog Button Inputs	Workable. Depending on Power source (i.e laptop via usb or 12 Battery source) the button analog value changes causing a slow response when pushing buttons.
Main menu.	Responsiveness is slow when switching from main menu to language select and back. When switching to select other menus responsiveness is perfect
Language Select	Operation is responsive and correctly reads languages from the fram. To note: The spanish selection has issues displaying to the screen such as “ñ”. This is believed to be a problem of the lcd Display
Left alone after 10 Minutes.	LCD display will display all black squares. Will reset when input pressed but cursor will display on line 4 where last displayed on screen.

Testing Disinfection Cycles

Selecting Disinfection from GUI Screen:	Selection operates correctly
Testing Disinfection Cycle:	Testing could not be completed as testing various ports at the same time was extremely difficult. However, each input could be tested individually and was confirmed to work directly.
Error alarms:	Alarm 2 was able to be triggered and the correct action was taken recording the error, reporting what went wrong, and exiting the disinfection cycle.

Testing Error Messages

Alarm 2:	Alarm 2 was correctly tested by oxidant tanks receiving no input. Alarm message was correctly triggered, and disinfection was stopped.
Clear all Messages:	All messages were cleared from the fram.